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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,383	10/30/2001	Volker Rasche	NL000577	5417

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER

THOMAS, COURTNEY D

ART UNIT PAPER NUMBER

2882

DATE MAILED: 07/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/022,383

Applicant(s)

RASCHE ET AL.

Examiner

Courtney Thomas

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 and 6 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 1 and 6 are objected to because of the following informalities:
2. Claim 1, lines 2-3 recite: "...X-ray images of an object of the coronary vascular system to be examined..." Examiner suggests the lines be re-written as follows: "...X-ray images of an ~~object of the~~ a coronary vascular system of an object to be examined ..."
3. Claim 1, line 4 recites: "... a single imaging device, i.e. an X-ray source ..." Examiner suggests the line be re-written as follows: "... a single imaging device, i.e. having an X-ray source and an X-ray pick-up device..."
4. Claim 1, line 7 recites: "... reconstructing a 3-dimensional volume of the imaged object..." Examiner suggests the line be re-written as follows: "... reconstructing a 3-dimensional volume of the imaged object from said set of 2-dimensional X-ray images..." (see specification p. 1, lines 1-6 and 14-16)
5. Claim 6, line 3 recites: "...a single imaging device, i.e. an X-ray source ..." Examiner suggests the line be re-written as follows: "... a single imaging device, i.e. having an X-ray source and an X-ray pick-up device..."
6. Claim 6, line 9 recites: "... C-arm is adjusted ..." Examiner suggests the line be re-written as follows: "... C-arm is ~~adjusted~~ adjustable ..." (see specification, p.4, lines 24-25).
7. Appropriate correction is required.

Allowable Subject Matter

8. Claims 1-4 and 6 are allowed.
9. The following is a statement of reasons for the indication of allowable subject matter:

Art Unit: 2882

10. As per claim 1 and dependent claims 2-4, the examiner found no reference in the prior art that disclosed or made obvious an X-ray imaging method comprising the step of: a) reconstructing a 3-dimensional volume of an object from a set of 2-dimensional X-ray images, wherein a run length of a scan rotation over substantially 180 degrees is approximately 10 degrees per second such that approximately 100 X-ray images corresponding to a quasi-stationary heart rate are obtained during the scan rotation, as recited in independent claim 1.

11. As per claim 6, the examiner found no reference in the prior art that disclosed or made obvious a 3-D rotational X-ray apparatus comprising: means for processing obtained images to reconstruct a 3-dimensional volume of an object and wherein a drive of a C-arm is adjustable to a run length of a scan rotation over substantially 180 degrees at approximately 10 degrees per second such that approximately 100 X-ray images corresponding to a quasi-stationary heart are obtained during the scan rotation, as recited in independent claim 6.

Conclusion

12. This application is in condition for allowance except for the following formal matters:

As noted above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: U.S. Patent 6,120,180 to Graumann and U.S. Patent 6,079,876 to Schuetz disclose X-

Art Unit: 2882


ray systems configured to obtain 2-dimensional images of an object of interest and to perform subsequent 3-D reconstruction of the imaged region.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney Thomas whose telephone number is (571) 272-2496. The examiner can normally be reached on M - F (9 am - 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272 2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CT
Courtney Thomas


EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER